【CLAIMS】
【Claim 1】

A method for generating feedback messages for auto repeat request (hereinafter, ARQ), the method comprising:

a) recording an ACK type in a first field;

b) estimating the last block sequence number of successive ACKed blocks, and recording the estimated last block sequence number in a second field;

c) recording the number of group of successive ACKed blocks after the block sequence number estimated in b) as the number of ACK MAPs in a third field;

d) recording a start block sequence number of the respective ACK MAPs in a fourth field;

e) recording lengths of the respective ACK MAPs in a fifth field by corresponding the lengths to the start block sequence number in d); and

f) sending a feedback message including information on the first field to the fifth field.

【Claim 2】

A method for generating a feedback message for ARQ, the method comprising:

a) recording an ACK type in a first field;

b) estimating the last block sequence number of successive ACKed blocks, and recording the estimated last block sequence number

in a second field;

c) estimating the number of groups of successive ACKed blocks or NACKed blocks after the block sequence number estimated in b) as the number of bulks, and recording the estimated number of bulks in a third field;

d) setting types of the respective bulks and recording the types in a fourth field;

e) estimating lengths of the types of respective bulks and recording the estimated lengths in a fifth field; and

f) sending a feedback message including information on the first field to the fifth field.

【Claim 3】

The method of claim 2, wherein in c), the number of bulks is set by selecting a group among groups having a predetermined number of bulks.

【Claim 4】

The method of claim 3, wherein bits assigned to bulk lengths of the groups respectively having the predetermined number of bulks are different from each other.

【Claim 5】

The method of claim 3, wherein the type of the bulk indicates whether the bulk is ACKed or NACKed.

【Claim 6】

The method of claim 2, wherein in d), a type of the first bulk is set to be NACKed, and types of bulks after the first bulk are recorded in a bulk flag for setting whether the corresponding bulk is ACKed or NACKed.

【Claim 7】

The method of claim 6, wherein in c), the number of bulks is set by selecting a group among groups respectively having a predetermined number of bulks.

【Claim 8】

The method of claim 7, where bits assigned to bulk lengths of the respective groups respectively having the predetermined number of bulks are different from each other.

【Claim 9】

A method for generating a feedback message for ARQ, the method comprising:

a) recording an ACK type in a first field;

b) estimating the last block sequence number of successive ACKed blocks and recording the estimated last block sequence number in a second field;

c) estimating the number of groups of successive ACKed blocks or NACKed blocks after the block sequence number estimated in b) as the number of bulks, and recording the estimated number of bulks in a third field;

d) setting types of the bulks to be alternately ACKed and

NACKed;

e) estimating bulk lengths corresponding to the type of respective bulks, and recording the estimated bulk lengths in a fourth field; and

f) sending information including the first field to the fourth field.

【Claim 10】

The method of any of claim1 to claim 9, wherein in a), the type of ACK is set to be a cumulative ACK.

【Claim 11】

The method of any of claim 1 to claim 9, wherein in c) the type of ACK is set to be a cumulative-bulk ACK.

【Claim 12】

The method of any of claim 1 to claim 9, further comprising:

determining whether the feedback message uses a dedicated channel; and

recording a connection identifier (CID) in a sixth field when no channel is dedicated to the feedback message.